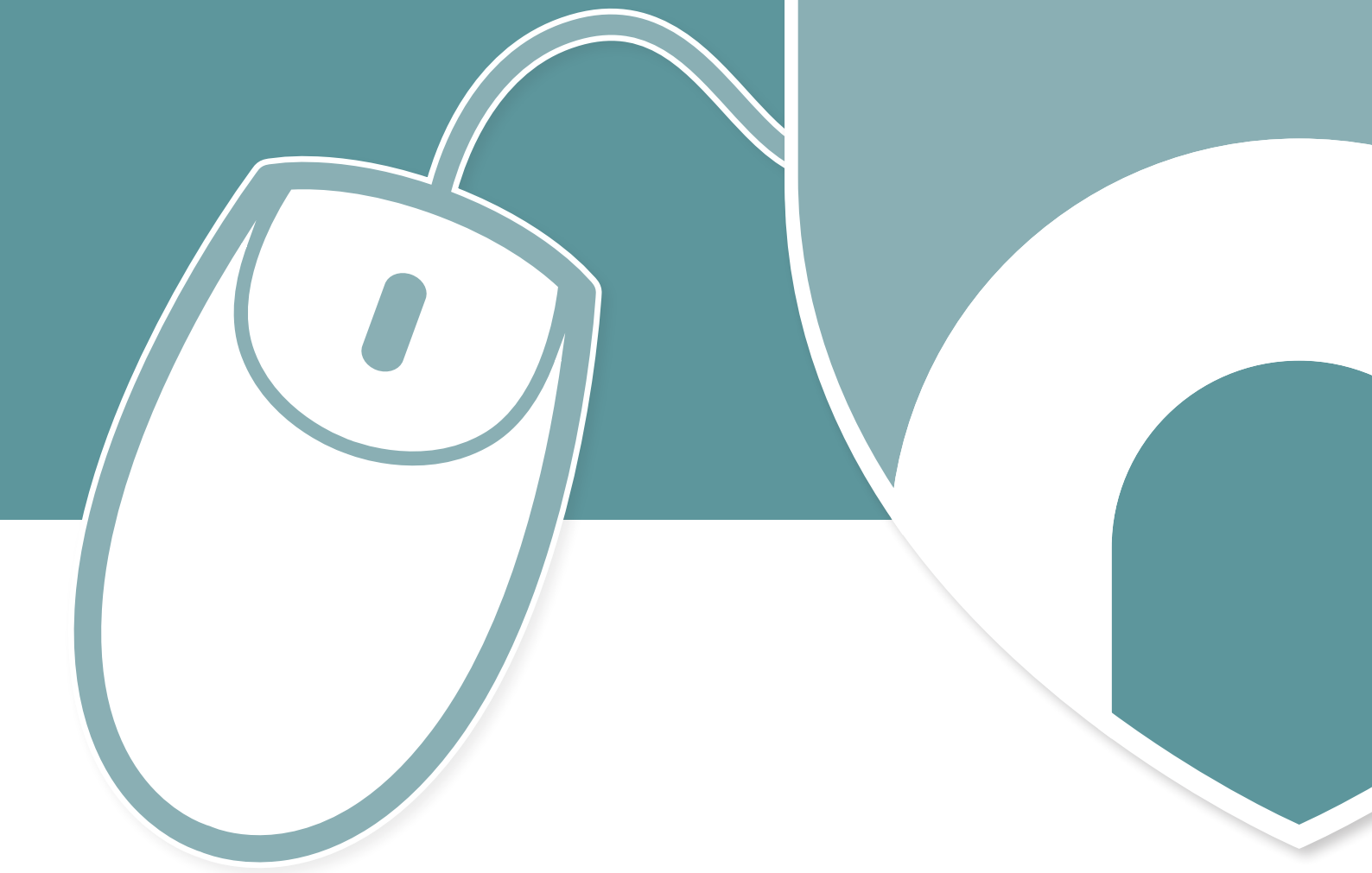
Awarding Great British Qualifications

# Level 5 Diploma in Business Information Technology (QCF) (L5DBIT)

## Qualification Unit Specification 2014/15



## Modification History

| Version | Revision Description |
|---|---|
| V1.0 | For release |
| V1.1 | Version for academic year 2014/15 |



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CONTENTS

# 1. About NCC Education

NCC Education is a UK-based awarding body, active in the UK and internationally. Originally part of the National Computing Centre, NCC Education started offering IT qualifications in 1976 and from 1997 developed its Higher Education portfolio to include Business qualifications, IT qualifications for school children and a range of Foundation qualifications.

With Centres in over forty countries, four international offices and academic managers worldwide, NCC Education strives to employ the latest technologies for learning, assessment and support. NCC Education is regulated and quality assured by Ofqual (the Office of Qualifications and Examinations Regulation, see www.ofqual.gov.uk) in England and Northern Ireland.

## 1.1 Why choose this qualification?

NCC Education's Level 5 Diploma in Business Information Technology is:

- **Regulated** by Ofqual and listed on the Qualifications and Credit Framework – Qualification Number 600/3049/5. The Qualifications and Credit Framework (QCF) is a credit-based qualifications framework, allowing candidates to take a Unit-based approach to building qualifications.

  For more information see:

  http://ofqual.gov.uk/qualifications-and-assessments/qualification-frameworks/

- **Quality assured** and well established in the UK and worldwide

- **Recognised and valued** by employers and universities worldwide

- **A pathway qualification** which makes up the second year of the NCC Education degree journey and builds upon the knowledge gained during the NCC Education Level 4 Diploma in Business Information Technology. On successful completion, candidates will be able to complete the final year of a degree at one of the many universities that recognise NCC Education qualifications, or pursue a career in the business and IT industry.

Candidates will study a balance of academic and vocational subjects in order to provide them with the necessary knowledge and skills to play a significant role in IT and business organisations.

# 2. Structure of the L5DBIT Qualification

| Qualification Title, Credits, Units and Level |
|---|
| **NCC Education Level 5 Diploma in Business Information Technology (QCF), 105 credits at QCF Level 5, 15 credits at QCF level 4. Candidates must pass all 8 Units to be awarded the Level 5 Diploma in Business Information Technology certificate.** |

| | | | |
|---|---|---|---|
| Professional Issues in IT (15 credits) | Information Systems Analysis (15 credits) | Dynamic Websites (15 credits) | Database Design and Development (15 credits) |
| Business IT Project (15 credits) | Information Systems and Organisations (15 credits) | Principles of Business Operations (15 credits) | Office Solutions Development (15 credits) |

**Please see Section 5 below for Syllabuses**

**This qualification is regulated by Ofqual and listed on the Qualifications and Credit Framework – Qualification Number 600/3049/5. For further information see http://register.ofqual.gov.uk/Qualification/Details/600_3049_5**

# 3. Assessment for the qualification

## 3.1 Assessment objectives

All assessment for the qualification is intended to allow candidates to demonstrate they have met the relevant Learning Outcomes. Moreover NCC Education's assessment is appropriate to the assessment criteria as stated in this specification and is regularly reviewed to ensure it remains consistent with the specification.

## 3.2 Overview of Qualification Unit Assessment

| Unit | Assessment Methods | | |
|---|---|---|---|
| | **Global Examination** | **Local Examination** | **Global Assignment** |
| Professional Issues in IT | - | 75% | 25% |
| Information Systems Analysis | 75% | - | 25% |
| Dynamic Websites | - | 75% | 25% |
| Database Design and Development | 75% | - | 25% |
| Information Systems and Organisations | 100% | - | - |
| Principles of Business Operations | 100% | - | - |
| Office Solutions Development | - | 75% | 25% |
| Business IT Project | - | - | 100% |

An examination is a time-constrained assessment that will take place on a specified date and usually in an NCC Education Centre. An assignment requires candidates to produce a written response to a set of one or more tasks, meeting a deadline imposed by the Centre. Global Assignments and Local Examinations are marked by the Centre and Global Examinations are marked by NCC Education. The overall Unit mark is computed from the weighted mean of its components. The pass mark for a Unit is 40%.

NCC Education Centres can provide candidates with a specimen assessment paper as well as a limited number of past examination and assignment papers.

## 3.3 Accessibility of Assessment

We review our guidelines on assessment practices to ensure compliance with equalities law and to confirm assessment for our Units is fit for purpose.

### 3.3.1 Reasonable adjustments and special consideration

NCC Education is committed to providing reasonable adjustments and special consideration so as to ensure disabled candidates, or those facing exceptional circumstances, are not disadvantaged in demonstrating their knowledge, skills and understanding.

Further information on NCC Education's arrangements for giving reasonable adjustments and special consideration can be found in the NCC Education *Reasonable Adjustments and Special Considerations Policy*.

### 3.3.2 Supervision and Authentication of Assessment

NCC Education Centres are required to organise all assessment activity for this specification according to NCC Education's policies and advice.

Candidates' identity and the authenticity of their work is verified and NCC Education moderates all assessment to ensure that the marking carried out is fair, and that the grading reflects the standard achieved by candidates as relevant to the specification Learning Outcomes and Assessment Criteria. Detailed guidance on this process and how candidate work must be submitted to NCC Education is given in NCC Education's *Examination Guidelines* and *Marking and Moderation Manual*. The *Marking and Moderation Manual* also includes full reminder checklists for Centre administrators.

# 4 Administration

## 4.1 Assessment Cycles

Four assessment cycles are offered throughout the year, in March, June, September and December.

Examination dates and assignment submission deadlines are published in the NCC Education *Activity Schedule*, which is provided to Centres by Customer Services. It is also available on *Connect,* NCC Education's student registration system.

The *Activity Schedule* also gives the key dates for registering candidates for assessment cycles, the dates when Centres can expect the assessment documentation and, ultimately, the assessment results from NCC Education.

## 4.2 Language of Assessment

All assessment is conducted in English.

## 4.3 Candidates

NCC Education's qualifications are available to those Centre candidates who satisfy the entry requirements as stated in this specification.

## 4.4 Qualification and Unit Entry Requirements

| **Entry Requirements** |
|---|
| • Holders of the NCC Education International Diploma in Computer Studies (IDCS)<br>• Holders of the NCC Education Level 4 Diploma in Computing (L4DC) (QCF)<br>• Holders of the NCC Education Level 4 Diploma in Business IT (L4DBIT) (QCF)<br>• Holders of any local or international qualification deemed to be a similar level to these awards. Candidates in this category whose first language is not English will also require IELTS 5.5 or equivalent.<br><br>**Direct Entry at Other Points**<br><br>The majority of students are expected to join the NCC Education Information Technology Journey at Level 4 or earlier. However, applications will be accepted for entry at any point and will be accepted, by means of documented evidence, using the following criteria:<br><br>• The applicant's general educational background is appropriate for the level of entry.<br><br>• The applicant's knowledge of computing is both equivalent to, and appropriate for, the level of entry. |

## 4.5 Candidate Entry

Candidates are registered for assessment via NCC Education's *Connect* system and according to the deadlines for registration provided in the *Activity Schedule*.

Candidates are registered for the assessment of each Unit they wish to take in a particular assessment cycle (e.g. Units A and B in June, Units C and D in September, Units E and F in December and Units G and H in March). This includes candidates who need to resit a particular Unit.

Further details can be found in NCC Education's *Operations Manual*.

## 4.6 Resits

If a candidate fails an assessment, they will be provided with opportunities to resit during the eligibility period.

Candidates may only seek reassessment in a previously failed Unit.

# 5. Syllabus

## 5.1. Professional Issues in IT

| | |
|---|---|
| **Title:** | Professional Issues in IT |

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|---|---|---|---|---|---|
| **QCF code:** | R/503/4768 | **Credits** | 15 | **Level** | 5 |

| | |
|---|---|
| **Guided Learning Hours** | 60 |

| **Learning Outcomes;**<br>The Learner will: | **Assessment Criteria;**<br>The Learner can: |
|---|---|
| 1. Understand the social, ethical and professional issues essential to the IT profession | 1.1 Identify and explain common legal, social and professional standards issues applicable to a professional working in the IT industry<br>1.2 Appraise the ethical aspects of various scenarios in the development, deployment and use of IT systems<br>1.3 Explain the social, legal and professional standards issues in the context of various scenarios in the development, deployment and use of IT systems |
| 2. Understand a project management life cycle and associated techniques | 2.1 Explain the project management lifecycle in the context of an IT project<br>2.2 Identify the key phases of the project management lifecycle in relation to a given scenario<br>2.3 Develop project management strategies for specified software development and maintenance projects |
| 3. Understand how to deploy a software application | 3.1 Explain the need for structured and planned deployment of a software application<br>3.2 Analyse the potential risks and problems of deploying a software application in a given scenario<br>3.3 Specify a software deployment process for a given scenario |
| 4. Understand risks and the management of them in software projects | 4.1 Explain the need for detailed risk analysis in a software engineering context<br>4.2 Explain risk management techniques<br>4.3 Analyse risks and risk management strategies in the context of an IT project |
| 5. Understand the principles and techniques of IT service management | 5.1 Analyse an IT service case study in respect to management requirements<br>5.2 Analyse objectives in an IT service case study<br>5.3 Apply management techniques to a problem situation in order to achieve objectives |

| | |
|---|---|
| 6. Be able to design software quality policies and procedures | 6.1 Define and explain the concept of software quality<br>6.2 Explain the use of metrics for software quality management and apply these to a given scenario<br>6.3 Evaluate the requirements for software quality policies and procedures in a problem context<br>6.4 Design software quality policies and procedures and apply these to a given scenario |

| **Syllabus content** | |
|---|---|
| **Topic** | **Course coverage** |
| Understanding IT Standards and Issues | • Introduction to the Unit<br>• Ethics – What are ethics and why are they relevant?<br>• Social, legal and professional issues in IT and their potential impact<br>• Why understanding standards and issues is so important<br>***Learning Outcome: 1*** |
| Applying IT Standards and Issues | • Applying social, ethical, legal and professional standards and issues to the IT profession and projects<br>• Analysing the effects of such issues and standards on the IT industry<br>***Learning Outcome: 1*** |
| IT Project Management | • What is IT project management and why is it necessary?<br>• Identifying and understanding project management lifecycles and phases<br>• Understanding project management strategies<br>***Learning Outcome: 2*** |
| Applied IT Project Management | • Identifying and applying project management lifecycle phases and strategies to IT projects<br>• Analysing, evaluating, concluding and reporting findings<br>***Learning Outcome: 2*** |
| Software Application Deployment | • What is software application deployment?<br>• Its place within an IT project's lifecycle<br>• How to identify potential issues<br>• Software application deployment standards<br>***Learning Outcome: 3*** |
| Applying Software Application Deployment to Projects | • Identifying deployment risks and issues<br>• Creating a software deployment procedure for an IT project<br>• Explanation of software deployment procedure<br>***Learning Outcome: 3*** |

| | |
|---|---|
| IT Risk Management and Analysis | • What is risk?<br>• Risk management and the techniques employed<br>• Risk identification and analysis in IT projects<br>• The consequences of not planning for risk<br>• Reactive vs. proactive<br>***Learning Outcome: 4*** |
| Applying, Evaluating and Managing Risk Analysis | • Applying risk analysis and risk management to an IT project<br>• Evaluating findings<br>• Reporting results<br>***Learning Outcome: 4*** |
| IT Service Management (ITSM) | • What is IT service management?<br>• Where is ITSM focused?<br>• Why is ITSM important?<br>• ITSM International Standards<br>***Learning Outcome: 5*** |
| Analysing and Applying IT Service Management | • Analysing and applying IT service management<br>• Evaluation of ITSM – advantages and disadvantages<br>***Learning Outcome: 5*** |
| Software Quality Policies and Procedures | • Understanding quality within IT<br>• What are quality procedures and policies?<br>• Why software quality procedures are important<br>• Measuring quality<br>• Theory of applying quality procedures to IT projects<br>• External standards<br>***Learning Outcome: 6*** |
| Applying Software Quality | • Writing a software quality policy<br>• Applying software quality procedures<br>• Revision of Unit content<br>• Assessment Clinic<br>***Learning Outcome: 6*** |

| **Related National Occupational Standards (NOS)** |
|---|
| **Sector Subject Area:** 6.1 ICT Professionals<br>**Related NOS:** 4.7.P.3 – Monitor the progress of system/solution/service design activities;<br>5.1.S.4 - Monitor, analyse and report on systems development activities;<br>5.2.P.1 - Plan software development activities;<br>5.2.P.3 - Control software development activities;<br>5.2.P.4 - Contribute to the management of software development;<br>5.3.P.2 - Contribute to the communication of the results of IT/Technology solution testing;<br>5.3.S.2 - Manage testing activities |

| Assessments |
| --- |
| Local Examination (75%)<br>Global Assignment (25%) |
| **See also Section 3 above** |

## 5.2. Information Systems Analysis

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| **Title:** | Information Systems Analysis |

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|---|---|---|---|---|---|
| **QCF code:** | Y/503/4769 | **Credits** | 15 | **Level** | 5 |

| | |
|---|---|
| **Guided Learning Hours** | 60 |

| **Learning Outcomes;**<br>The Learner will: | **Assessment Criteria;**<br>The Learner can: |
|---|---|
| 1. Understand soft and hard approaches to the analysis of information systems | 1.1 Explain the key aspects of Soft Systems Methodology (SSM) and related approaches<br>1.2 Explain the key aspects of Structured Systems Analysis and Design Methodology (SSADM) and related approaches<br>1.3 Identify business situations where a soft or hard systems analysis might be appropriate<br>1.4 Explain combined soft/hard frameworks (such as Multiview). |
| 2. Understand the techniques associated with requirements capture | 2.1 Explain and apply stakeholder analysis techniques<br>2.2 Explain and apply CATWOE |
| 3. Understand the different viewpoints associated with IS methodologies | 3.1 Explain object-oriented IS methodologies<br>3.2 Explain organisation-oriented IS methodologies<br>3.3 Explain process-oriented IS methodologies<br>3.4 Explain people-oriented IS methodologies<br>3.5 Evaluate IS methodologies of different types in the context of a business scenario |
| 4. Be able to apply various analytical techniques for understanding a complex organisational environment | 4.1 Evaluate a knowledge-based view of organisations<br>4.2 Define and apply techniques for analysing the business environment (such as PEST and SWOT) |
| 5. Understand the relationship between the economic, social, political and technical factors influencing a business problem | 5.1 Analyse the economic, social, political and technical aspects of a business systems problem<br>5.2 Evaluate the different aspects of a business problem in the context of potential solutions |
| 6. Understand and apply the principles of interface design and the requirements and characteristics of users that motivate these | 6.1 Design or evaluate an interface with regard to the characteristics of its users<br>6.2 Explain the requirements of computer users and how good design can address these |

| Syllabus content | |
|---|---|
| **Topic** | **Course coverage** |
| Introduction to Information Systems Analysis | • An introduction to the Unit<br>• Define and explain the term information system<br>• Identify types and examples of information systems<br>• Discuss Information systems analysis in the context of the SDLC<br>• Define and explain the abbreviation SDLC<br>• Define and explain analysis and requirements capture<br>• Discuss the role of analysis and requirements capture in specific contexts<br>• Define the term methodology<br>• Determine the requirement for different methodologies<br>• Present an overview of Information System Analysis and Design methodologies<br>• Research and discuss case studies<br>***Learning Outcome: 1*** |
| Hard Approaches to the Analysis of Information Systems | • Define and explain the term hard approach to systems analysis<br>• Identify examples of hard approach methodologies<br>• Identify business situations where a hard approach to systems analysis might be appropriate<br>• Define and explain the abbreviation SSADM<br>• Identify and discuss the advantages of SSADM<br>• Identify and discuss the disadvantages of SSADM<br>• Define and explain the abbreviation DFD<br>• Define and explain terminology associated with DFDs<br>• Illustrate the use of DFDs<br>• Construct DFDs<br>• Provide solutions to business problems using DFDs<br>***Learning Outcome: 1*** |
| Soft Approaches to the Analysis of Information Systems | • Define and explain the term soft approach to systems analysis<br>• Identify examples of soft approach methodologies<br>• Identify business situations where a soft approach to systems analysis might be appropriate<br>• Define and explain the abbreviation SSM<br>• Identify and discuss the advantages of SSM<br>• Identify and discuss the disadvantages of SSM<br>• Provide solutions to business problems using SSM<br>• Research and discuss case studies<br>***Learning Outcome: 1*** |

| | |
|---|---|
| Combined Soft/Hard Approaches to the Analysis of Information Systems | • Define and explain the term combined soft/hard approach to systems analysis<br>• Identify examples of combined soft/hard approach methodologies<br>• Identify business situations where a combined soft/hard approach to systems analysis might be appropriate<br>• Define and explain the term Multiview<br>• Identify and discuss the advantages of Multiview<br>• Identify and discuss the disadvantages of Multiview<br>• Provide solutions to business problems using Multiview<br>• Research and discuss case studies<br>• Compare and contrast soft, hard and combined approaches to systems analysis<br>***Learning Outcome: 1*** |
| Techniques Associated with Requirements Capture | • Define and explain the term stakeholder<br>• Identify and discuss types of stakeholder analysis techniques<br>• Define and illustrate the Stakeholder Analysis Matrix<br>• Define and explain the abbreviation CATWOE<br>• Identify and discuss the advantages of CATWOE<br>• Identify and discuss the disadvantages of CATWOE<br>• Provide solutions to business problems using CATWOE<br>• Evaluate CATWOE<br>***Learning Outcome: 2*** |

| | |
|---|---|
| Organisation-Oriented and People-Oriented IS Methodologies | • Define and explain the term organisation-oriented IS methodology<br>• Identify the types of organisation-oriented IS methodologies<br>• Identify and discuss the advantages of organisation-oriented methodologies<br>• Identify and discuss the disadvantages of organisation-oriented methodologies<br>• Evaluate and discuss an organisation-oriented methodology in the context of a business scenario<br>• Define and explain the term people-oriented IS methodology<br>• Identify the types of people-oriented IS methodologies<br>• Identify and discuss the advantages of people-oriented methodologies<br>• Identify and discuss the disadvantages of people-oriented methodologies<br>• Define and explain the abbreviation ETHICS<br>• Evaluate and discuss the ETHICS methodology in the context of a business scenario<br>• Define and explain the term Agile methodology<br>• Evaluate and discuss the Agile methodology in the context of a business scenario<br>***Learning Outcome: 3*** |
| Process-Oriented IS Methodologies | • Define and explain the term process-oriented IS methodology<br>• Identify the types of process-oriented IS methodologies<br>• Identify and discuss the advantages of process-oriented methodologies<br>• Identify and discuss the disadvantages of process-oriented methodologies<br>• Define and explain the term Yourdon methodology<br>• Evaluate and discuss the Yourdon methodology in the context of a business scenario<br>• Define and explain the abbreviation POEM<br>• Evaluate and discuss the POEM methodology in the context of a business scenario<br>***Learning Outcome: 3*** |

| | |
|---|---|
| Object-Oriented IS Methodologies | • Define and explain the term object-oriented IS methodology<br>• Identify the types of object-oriented IS methodologies<br>• Define and explain terminology associated with an object oriented methodology<br>• Illustrate the construction of an object-oriented methodology<br>• Identify and discuss the advantages of object-oriented methodologies<br>• Identify and discuss the disadvantages of object-oriented methodologies<br>• Evaluate and discuss an object-oriented methodology in the context of a business scenario<br>***Learning Outcome: 3*** |
| Analytical Techniques for Understanding a Complex Organisational Environment | • Define and explain the term knowledge-based view of organisations<br>• Identify and discuss the advantages of an organisation-oriented methodology<br>• Identify and discuss the advantages of an organisation-oriented methodology<br>• Define and explain the abbreviation SWOT<br>• Demonstrate how SWOT can be used<br>• Apply SWOT to a business scenario<br>• Define and explain the abbreviation PEST<br>• Demonstrate how PEST can be used<br>• Apply PEST to a business scenario<br>***Learning Outcome: 4*** |
| Analysis of Factors Influencing a Business Problem | • Analyse the economic aspects of a business systems problem<br>• Evaluate and discuss the economic aspects of a business systems problem in the context of potential solutions<br>• Analyse the social aspects of a business systems problem<br>• Evaluate and discuss the social aspects of a business systems problem in the context of potential solutions<br>• Analyse the political aspects of a business systems problem<br>• Evaluate and discuss the political aspects of a business systems problem in the context of potential solutions<br>• Analyse the technical aspects of a business systems problem<br>• Evaluate and discuss the technical aspects of a business systems problem in the context of potential solutions<br>• Research and discuss case studies<br>***Learning Outcome: 5*** |

| | |
|---|---|
| Principles of Interface Design and the Requirements and Characteristics of Users that Motivate These | • Identify the principles and good practice of interface design<br>• Analyse the requirements of the users of an interface<br>• Analyse the characteristics of the users of an interface<br>• Demonstrate how good interface design can address the requirements and characteristics of an interface user<br>***Learning Outcomes: 6*** |
| Design or Evaluate an Interface with regard to the Requirements and Characteristics of its Users | • Design an interface that addresses the requirements and characteristics of an interface user<br>• Evaluate and discuss whether interface design principles have been applied to an interface<br>• Evaluate and discuss whether interface design principles have addressed the requirements and characteristics of the interface user<br>***Learning Outcomes: 6*** |

| **Related National Occupational Standards (NOS)** |
|---|
| **Sector Subject Area:** 6.1 ICT Professional Competence<br>**Related NOS:** 4.1.P.1 – Carry out IT/technology architecture activities<br>4.1.P.2.C – Contribute to information activities relating to IT/technology architecture models<br>4.1.P.1 – Contribute, under supervision, to the preparation of a data analysis assignment; 4.1.P.2 – Assist in the development of data analysis models<br>6.1.A.1 - Contribute to information management<br>6.1.A.2 - Document information assets<br>6.1.P.1 - Manage the classification and categorisation of information |

| **Assessments** |
|---|
| Global Examination (75%)<br>Global Assignment (25%) |
| **See also Section 3 above** |

## 5.3. Dynamic Websites

| | |
|---|---|
| **Title:** | Dynamic Websites |

| | | | | | |
|---|---|---|---|---|---|
| **QCF code:** | Y/503/4786 | **Credits** | 15 | **Level** | 5 |

| | |
|---|---|
| **Guided Learning Hours** | 60 |

| **Learning Outcomes;**<br>The Learner will: | **Assessment Criteria;**<br>The Learner can: |
|---|---|
| 1. Understand the various tools and techniques used for Web Application development | 1.1 Define and explain web applications and their functions<br>1.2 Identify and evaluate appropriate web application development tools for a given scenario<br>1.3 Identify and evaluate appropriate web application development techniques for a given scenario |
| 2. Be able to develop data-driven websites | 2.1 Design and code a web-based user interface appropriate to a given problem<br>2.2 Design and build a database which interacts with a web page<br>2.3 Create scripts to facilitate data transfer between a database and a web page.<br>2.4 Evaluate the functionality of a database-driven website in the context of a given problem |
| 3. Be able to apply the various tools and techniques used to build data-driven websites | 3.1 Select appropriate web development tools for a given scenario<br>3.2 Use a development tool to develop a dynamic web solution which addresses a given scenario |
| 4. Understand the functions of web services | 4.1 Define and explain a range of web services (e.g XML, RSS, SOAP).<br>4.2 Evaluate and select the optimal web service solution for a given problem<br>4.3 Appraise the potential business benefits of web services |
| 5. Be able to create and deploy web services | 5.1 Use one or more web services to build a dynamic website which addresses a given business problem<br>5.2 Evaluate a dynamic website which utilises web services in the context of business objectives |

| Syllabus content | |
|---|---|
| **Topic** | **Course coverage** |
| Introduction to the Unit | • Introduction to the Unit<br>• N-Tier Architectures<br>• Introduction to layers and the tools used<br>***Learning Outcomes: 1, 3, & 4*** |
| Introduction to PHP | • Programming with PHP<br>• Language design<br>• Loops, Selections and Iterations<br>• Version considerations<br>• HTML via PHP<br>***Learning Outcomes: 1 & 2*** |
| Cookies and Sessions | • Statelessness in HTTP<br>• Cookies<br>• Sessions<br>• The role of PHP in web-based applications<br>***Learning Outcomes: 1 & 2*** |
| MySQL and PHP | • Creating tables via PHP<br>• Manipulating tables via PHP<br>• Querying database tables via PHP<br>***Learning Outcomes: 2*** |
| Web Based Protocols | • XML<br>• RSS<br>• XHTML<br>• CSS<br>***Learning Outcomes: 1 & 3*** |
| Ajax (1) | • Introduction to dynamic client side scripting with Java-script<br>• Building a web-based user interface<br>• JavaScript events<br>• Asynchronous Applications<br>***Learning Outcomes: 1 & 2*** |
| Ajax (2) | • Manipulating the Document Object Model<br>• XML DOM trees<br>• Ajax requests and responses<br>• jQuery<br>***Learning Outcomes: 1 & 2*** |

| | |
|---|---|
| Evaluation | • Standards validation<br>• User centred design<br>• Accessibility<br>• Browser compatibility<br>***Learning Outcomes: 2 & 4*** |
| Web Services | • SOAP<br>• REST<br>• Google Directions<br>• Mash-Ups<br>***Learning Outcomes: 4 & 5*** |
| jQuery | • Overview of jQuery<br>• Presentational Flourishes<br>• Selectors<br>• Filters<br>• Callbacks<br>***Learning Outcomes: 1, 2 & 3*** |
| jQuery and Ajax | • jQuery and Ajax<br>• jQuery plug-ins<br>• jQuery widgets<br>• Themeroller<br>***Learning Outcomes: 1, 2 & 3*** |
| Integration | • Integration of topics<br>• Development of solution to meet a specified objective<br>***Learning Outcomes: 3 & 5*** |

| **Related National Occupational Standards (NOS)** |
|---|
| **Sector Subject Area:** 6.1 ICT Professionals<br>**Related NOS:** 4.7.P.1 – Prepare, under supervision, for system/solution/service design activities;<br>4.7.P.2 – Assist with the design of system/solution/service design;<br>4.7.P.3 – Monitor the progress of system/solution/service design activities;<br>5.1.S.2 - Initiate systems development activities;<br>5.3.S.3 - Manage systems development activities;<br>5.2.P.2 - Perform software development activities |

| **Assessments** |
|---|
| Local Examination (75%)<br>Global Assignment (25%) |
| **See Also Section 3 above** |

## 5.4. Database Design and Development

| | |
|---|---|
| **Title:** | Database Design and Development |

| | | | | | |
|---|---|---|---|---|---|
| **QCF code:** | D/503/4787 | **Credits** | 15 | **Level** | 5 |

| | |
|---|---|
| **Guided Learning Hours** | 60 |

| **Learning Outcomes;**<br>The Learner will: | **Assessment Criteria;**<br>The Learner can: |
|---|---|
| 1. Understand the enterprise application of database systems | 1.1 Summarise the common use of distributed database management systems<br>1.2 Explain the meaning of the term disributed database management system<br>1.3 Describe the components of a disributed database management system<br>1.4 Summarise the common use of data warehouses<br>1.5 Explain the meaning of the term data warehouse<br>1.6 Describe the structure of a data warehouse |
| 2. Understand how to enhance the design of and further develop a database system | 2.1 Describe how tables that contain redundant data can suffer from update anomalies<br>2.2 Explain how to overcome update anomalies using normalisation<br>2.3 Describe how to retrieve data from one or more tables using SQL |
| 3. Be able to enhance a logical database design | 3.1 Check the tables are well-structured using normalisation<br>3.2 Define the integrity constraints on the tables |
| 4. Be able to develop a physical database design | 4.1 Map a logical database design to a physical database design<br>4.2 Design tables for a target DBMS<br>4.3 Design a representation of derived data<br>4.4 Design integrity constraints for the target DBMS<br>4.5 Denormalise tables where appropriate |
| 5. Be able to enhance a database system using SQL | 5.1 Apply integrity constraints<br>5.2 Retrieve data from one or more tables using join<br>5.3 Retrieve data from one or more tables using sub-queries |

| Syllabus content | |
|---|---|
| **Topic** | **Course coverage** |
| Key Concepts in Databases and Database Management | • Review of key material from Level 4 databases Unit<br>• Common uses of databases<br>• Types of databases<br>• Overview of database development<br>***Learning Outcomes: All*** |
| Enhancing Design 1 | • Introduction to normalisation<br>• The concept of functional dependency<br>• Data redundancy and update anomalies<br>• Overcoming anomalies with normalisation<br>***Learning Outcome: 2*** |
| Enhancing Design 2 | • Deriving a set of relations from a conceptual data model<br>• Validating relations using normalisation<br>• Integrity constraints on tables<br>***Learning Outcome: 3*** |
| Data Retrieval 1 | • Table and view structure in a relational database<br>• Data types<br>• Null values<br>• Retrieving data using SQL<br>***Learning Outcome: 2*** |
| Data Retrieval 2 | • Referential integrity in relational databases<br>• Types of joins<br>• Retrieving data using joins<br>• Retrieving data using sub-queries<br>***Learning Outcome: 5*** |
| Physical Design 1 | • The purpose of physical design<br>• Mapping the logical database design to a physical database design<br>• Designing tables for the target DBMS<br>***Learning Outcome: 4*** |
| Physical Design 2 | • The concept of derived data<br>• Designing a representation of derived data<br>***Learning Outcome: 4*** |
| Physical Design 3 | • Types of constraints<br>• Designing integrity constraints for the target DBMS<br>***Learning Outcomes: 3, 4 & 5*** |

| | |
|---|---|
| Physical Design 4 | • Understanding transactions<br>• Denormalisation<br>• Improving performance<br>• Estimating the size of the database<br>***Learning Outcome: 4*** |
| Distributed Databases | • The need for distributed databases<br>• Components of distributed databases<br>• Advantages and disadvantages of distributed databases<br>• Homogenous and Heterogeneous distribution<br>• Distributed Database Design<br>***Learning Outcome: 1*** |
| Data Warehouses | • The need for business intelligence and the concept of the data warehouse<br>• The difference between Online Transaction Processing (OLTP) systems and data warehousing<br>• The architecture and main components of a data warehouse<br>***Learning Outcome: 1*** |
| Summary | • Summary of Unit, linking Units to objectives and to each other<br>• Clarification of material and related issues as identified by students<br>***Learning Outcomes: All*** |

| **Related National Occupational Standards (NOS)** |
|---|
| **Sector Subject Area:** 6.1 ICT Professionals<br>**Related NOS:** 4.1.P.1 – Contribute, under supervision, to the preparation of a data analysis assignment;<br>4.1.P.2 – Assist in the development of data analysis models;<br>4.1.P.3 – Manage the outcomes from the data analysis assignment;<br>4.5.P.2 – Manage, under supervision, the maintenance of data design assignments;<br>4.5.P.1 – Provide others, when requested, with specified information relating to data design activities;<br>4.5.S.1 – Select and implement appropriate data design processes;<br>4.5.S.2 – Manage the progress of data design assignments;<br>4.5.S.3 – Review the effectiveness of data design deliverables. |

| **Assessments** |
|---|
| Global Examination (75%)<br>Global Assignment (25%) |
| **See also Section 3 above** |

## 5.5. Information Systems and Organisations

| **Title:** | Information Systems and Organisations |
|---|---|

| **QCF code:** | H/503/3785 | **Credits** | 15 | **Level** | 5 |
|---|---|---|---|---|---|

| **Guided Learning Hours** | 48 |
|---|---|

| **Learning Outcomes;**<br>The Learner will: | **Assessment Criteria;**<br>The Learner can: |
|---|---|
| 1. Analyse the use of Information Systems (IS) within organisations | 1.1 Assess the importance of IS in organisations as a store for data, information and knowledge<br>1.2 Discuss the different social contexts and stakeholder perspectives of IS<br>1.3 Understand the relationship between IS and process change within organisations |
| 2. Examine the many internal and external uses of an organisation's IS | 2.1 Explain how IS contributes to the management of knowledge within organisations<br>2.2 Analyse how interactions with customers and external parties can be managed using IS |
| 3. Critically evaluate the costs and benefits of a range of IS systems | 3.1 Discuss the costs and benefits involved in implementing new IS<br>3.2 Analyse the importance of having a balanced portfolio of IS that supports organisational strategy |
| 4. Critically evaluate the cultural, structural and political aspects of IS | 4.1 Assess the effects of IS on organisational structure and central decision-making<br>4.2 Analyse the political aspects of IS |
| 5. Examine the issues associated with human interaction with IS | 5.1 Assess the IS needs of a range of individuals<br>5.2 Discuss the legal and ethical issues surrounding IS<br>5.3 Analyse how IS can be used to increase commitment and control in an organisation<br>5.4 Describe the issues surrounding the acceptance of new technology |
| 6. Assess the effects of technological change on IS and the organisations | 6.1 Evaluate the process of implementing new IS<br>6.2 Explain how to identify and influence stakeholders when implementing new IS |

| **Syllabus content** | |
|---|---|
| **Topic** | **Course coverage** |
| Organisations and Information Systems | • Data, information and knowledge<br>• The uses and importance of IS to organisations<br>***Learning Outcome: 1*** |

| | |
|---|---|
| Social Contexts and Perspectives on IS | • Social contexts within organisations<br>• Different perspectives<br>• Technology interaction with the organisation<br>***Learning Outcome: 1*** |
| Internal IS and Enterprise Systems | • Evolution and classification of IS,<br>• Information flows<br>• Processes and enterprise wide systems<br>***Learning Outcome: 2*** |
| Organisational Strategy and IS | • Alignment to organisational needs<br>• Ensuring the IS portfolio supports the business and supports stakeholders<br>***Learning Outcome: 2*** |
| Evaluating IS | • Sources of cost and benefit<br>• Tangible and intangible factors<br>• Formal-rational evaluation<br>• Wider criteria for evaluating IS<br>***Learning Outcome: 3*** |
| Cultural, Structural and Political Aspects of IS | • Culture and IS<br>• How IS affect structure<br>• Central and local decision making<br>• Political aspects of IS<br>***Learning Outcome: 4*** |
| People and IS Interpretation | • Human needs<br>• Information ownership<br>• Legal and ethical issues<br>• Data security<br>***Learning Outcome: 5*** |
| The 21st Century Organisation | • Using IS for commitment and control<br>• Managing distributed work<br>• Evolution of working practices<br>***Learning Outcome: 5*** |
| User Acceptance and the Socio-technical Approach | • Technology acceptance and the socio-technical approach<br>• HCI and usability considerations<br>***Learning Outcome: 5*** |
| IS and the Customer | • Dealing with customers, suppliers and partners.<br>• E-business<br>***Learning Outcome: 2*** |

| | |
|---|---|
| IS and Organisational Change | • Implementing IS and the context of change<br>• Critical aspects of a project<br>• Understanding models of change<br>• Identifying and influencing stakeholders<br>***Learning Outcome: 6*** |
| Benefits Management | • Characteristics of successful IS implementations<br>***Learning Outcome: 6*** |

| **Related National Occupational Standards (NOS)** |
|---|
| **Sector Subject Area:** 15.3 Business management<br>**Related NOS:** M&LE4 - Promote the use of technology within your organisation;<br>BAD111 Support the design and development of information systems;<br>BAD121 Support the management and development of an information system;<br>BAD122 Manage and evaluate information systems. |

| **Assessments** |
|---|
| Global Examination (100%) |
| **See also Section 3 above** |

## 5.6. Principles of Business Operations

| | |
|---|---|
| **Title:** | Principles of Business Operations |

| | | | | | |
|---|---|---|---|---|---|
| **QCF code:** | D/503/3784 | **Credits** | 15 | **Level** | 5 |

| | |
|---|---|
| **Guided Learning Hours** | 48 |

| **Learning Outcomes;**<br>The Learner will: | **Assessment Criteria;**<br>The Learner can: |
|---|---|
| 1. Examine the frameworks of operations management | 1.1 Evaluate the principles of operations management<br>1.2 Analyse the key activities in operations management and how they have changed over time<br>1.3 Analyse the use, design and development of value chains<br>1.4 Discuss the methods used to measure the performance of operations management activities<br>1.5 Assess how customers wants and needs drive operations strategy |
| 2. Analyse the use of technology in operations management | 2.1 Examine how new technologies are used in value chains<br>2.2 Assess how technology is used to create integrated operating systems |
| 3. Assess the design of goods and services | 3.1 Examine how goods and services are designed<br>3.2 Examine how production and design processes are developed |
| 4. Analyse how operations management processes are developed | 4.1 Assess the layout of facilities and processes<br>4.2 Examine the need for workplace and job design<br>4.3 Discuss the components and design of supply chains<br>4.4 Assess the process and the use of forecasting in short and long-term decisions relating to capacity<br>4.5 Discuss the need for accurate resource planning and scheduling<br>4.6 Analyse the importance of various quality measures in operations management |
| 5. Evaluate the use of lean operations | 5.1 Examine the underlying principles of lean operations<br>5.2 Analyse the use of 'just-in-time' systems |

| Syllabus content | |
|---|---|
| **Topic** | **Course coverage** |
| Introduction to Operations | • The nature of operations and introduction to Business Operations concepts<br>***Learning Outcome: 1*** |
| Value Chains and Global Operations | • Value chain design and development and their context in global operations<br>***Learning Outcome: 1*** |
| Frameworks for Operations Management | • The scope of performance management and designing performance management and measurement systems<br>***Learning Outcome: 1*** |
| Operations for Business Competitiveness | • Operations strategy and competitive priorities – understanding customers wants and needs<br>***Learning Outcome: 1*** |
| Using Technology | • Issues relating to operations design technologies implementation and management<br>***Learning Outcome: 2*** |
| Goods and Services | • Designing goods and services in an operations context<br>***Learning Outcome: 3*** |
| Facilities Design | • Facility design and layout decisions in an operations context<br>***Learning Outcome: 4*** |
| Supply Chains and Facilities Location | • Designing supply chains and facilities location decisions<br>***Learning Outcome: 4*** |
| Capacity | • Managing operations capacity and forecasting for business operations<br>***Learning Outcome: 4*** |
| Resources | • Managing operations resource planning and scheduling<br>***Learning Outcome: 4*** |
| Quality | • Managing operations quality in a global context<br>***Learning Outcome: 4*** |
| Managing Operations | • Lean operations and just-in-time systems<br>***Learning Outcome: 5*** |

| Related National Occupational Standards (NOS) |
|---|
| **Sector Subject Area:** 15.3 Business management<br>**Related NOS:** BAA1110 Prepare, co-ordinate and monitor operational plans. |

| Assessments |
|---|
| Global Examination (100%) |
| **See also Section 3 above** |

## 5.7. Office Solutions Development

| | |
|---|---|
| **Title:** | Office Solutions Development |

| | | | | | |
|---|---|---|---|---|---|
| **QCF code:** | R/601/1971 | **Credits** | 15 | **Level** | 4 |

| | |
|---|---|
| **Guided Learning Hours** | 60 |

| **Learning Outcomes;**<br>The Learner will: | **Assessment Criteria;**<br>The Learner can: |
|---|---|
| 1. Understand how application software can support business processes | 1.1 Discuss ways in which application software can support business processes<br>1.2 Justify the use of different application software to support a given user requirement or business process<br>1.3 Discuss the importance of addressing both user and business requirements |
| 2. Be able to design and implement office solutions | 2.1 Design a solution to address a business or user need<br>2.2 Use advanced tools and techniques to implement a solution<br>2.3 Test a solution against expected results |
| 3. Be able to demonstrate that business processes have been enhanced/improved | 3.1 Discuss ways in which end user engagement has taken place<br>3.2 Provide evidence that business processes have been enhanced/improved<br>3.3 Evaluate possible further improvements that could be made to enhance the system |

| **Syllabus content** | |
|---|---|
| **Topic** | **Course coverage** |
| Application Software and Business Processes | • An Introduction to the Unit<br>• Types of business processes and functions<br>• Application software defined<br>• Types and range of application software<br>• How application software supports business processes<br>• Research into examples of commercial software<br>• Evaluation of the role of applications software in specific business contexts<br>• Case studies<br>• Glossary<br>***Learning Outcome: 1*** |

| | |
|---|---|
| An Introduction to End User Software Development | • End-User defined<br>• Examine the need to address both user and business requirements<br>• Interface defined<br>• Identify Interface Design principles and good practice<br>• Microsoft Office interface development<br>• Case studies<br>• Glossary<br>***Learning Outcome: 1*** |
| An Introduction to the Advanced Features and Functions of the Microsoft Office Suite | • An introduction to the Microsoft Office suite<br>• An overview of advanced features and functions<br>• How the above improve business performance<br>• Consideration of both user and business requirements<br>• Application of interface design principles<br>• Glossary<br>***Learning Outcomes: 1 & 2*** |
| Advanced Features and Functions of Microsoft Access, Excel and Word | • An overview of advanced features and functions in Access<br>• An overview of advanced features and functions in Excel<br>• An overview of advanced features and functions in Word<br>• Glossary<br>***Learning Outcome: 2*** |
| An Introduction to VBA and Macros | • Define what is meant by a macro<br>• Define what is meant by VBA<br>• Explain that there is a range of macros used for different purposes<br>• Describe the methods that can be used to develop macros<br>• Explain the issues of macros and security<br>• Use the Visual Basic Editor to create macros<br>• Use the Record Macro feature<br>• Save macros<br>• Edit macros<br>***Learning Outcome: 2*** |
| Using Macros in Microsoft Word | • Develop macros<br>• Edit macros<br>• Use the Macro Recorder<br>• Assign a macro to the keyboard<br>• Assign a macro to a button<br>• Format text or pictures using macros<br>• Customise headers and footers using macros<br>• Secure documents against malicious macros<br>***Learning Outcome: 2*** |

| | |
|---|---|
| Using Macros in Microsoft Access | • Create a macro in Microsoft Access<br>• Understand key macro terms<br>• Explain the sequence of macro production<br>• Create Autoexec macros<br>• Input data using a macro<br>• Validate data using a macro<br>• Filter and find records using a macro<br>• Print records using a macro<br>• Assign a macro to a command button<br>• Navigate between forms and records using a macro<br>• Run a query using a macro<br>• Secure documents against malicious macros<br>***Learning Outcome: 2*** |
| Using Macros in Microsoft Excel - 1 | • Create a macro in Microsoft Excel<br>• Format titles, formulas and tables<br>• Input dates and times<br>• Input and select data using a macro<br>• Provide data validation using a macro<br>• Design message boxes and feedback<br>• Design interactive user forms<br>***Learning Outcome: 2*** |
| Using Macros in Microsoft Excel - 2 | • Create a macro that uses absolute cell references<br>• Create a macro that uses relative cell references<br>• Create an icon to run a macro<br>• Print data using a macro<br>• Secure documents against malicious macros<br>***Learning Outcome: 2*** |
| Testing Software Development | • The need for testing<br>• Types of testing<br>• The Test Plan<br>• Determine expected test results<br>• Record actual test results to enable comparison with expected results<br>• Analyse actual test results against expected results to identify discrepancies<br>• Investigate test discrepancies to identify and rectify their causes<br>• Testing Checklist<br>• Glossary<br>***Learning Outcome: 2*** |

| | |
|---|---|
| Evaluating Software Development | • Types of evaluation<br>• Functionality evaluated<br>• Efficiency evaluated<br>• Reliability evaluated<br>• Usability evaluated<br>• Identify successful user interaction<br>• Identify enhancements<br>• Identify potential improvements<br>• Evaluation Checklist<br>• Glossary<br>***Learning Outcome: 3*** |
| Combining End User Software Development, Testing and Evaluation | • Topic Scenario<br>• Identify business processes<br>• Identify application software<br>• Identify good practice in software interface design<br>• Use advanced features and functions in Microsoft Excel and Word<br>• Use macros in Microsoft Excel and Word<br>• Produce a test plan<br>• Produce an evaluation checklist<br>***Learning Outcomes: 1, 2 & 3*** |

| **Related National Occupational Standards (NOS)** |
|---|
| **Sector Subject Area**: 6.1 ICT Professional Competence<br>**Related NOS**: 4.6.A.1 – Contribute to human interaction and interface (HCI) design activities;<br>4.6.A.2 – Assist, under supervision, with the progress of human interaction and interface (HCI) design assignments;<br>4.6.P.1 – Prepare for human interaction and interface (HCI) design activities;<br>4.6.P.2 – Implement, under supervision, human interaction and interface (HCI) design activities;<br>4.6.P.3 – Manage the needs of different users of HCI design activities;<br>4.6.S.1 – Plan human interaction and interface (HCI) design activities;<br>5.1.A.1 - Carry out system development activities under direction;<br>5.1.P.1 - Perform systems development activities;<br>5.1.P.2 - Contribute to the management of systems development;<br>5.2.P.2 - Perform software development activities;<br>5.3.A.1 - Carry out IT/Technology solution testing activities under direction;<br>5.3.P.1 - Carry out IT/Technology solution testing. |

| Assessments |
| --- |
| Local Examination (75%)<br>Global Assignment (25%) |
| **See also Section 3 above** |

## 5.8. Business IT Project

| | |
|---|---|
| **Title:** | Business IT Project |

| | | | | | |
|---|---|---|---|---|---|
| **QCF code:** | L/503/4770 | **Credits** | 15 | **Level** | 5 |

| | |
|---|---|
| **Guided Learning Hours** | 24 |

| **Learning Outcomes;**<br>The Learner will: | **Assessment Criteria;**<br>The Learner can: |
|---|---|
| 1. Plan and manage the development of a computing artefact | 1.1 Produce a viable project plan<br>1.2 Check progress against a plan<br>1.3 Evaluate performance against a plan |
| 2. Gather and evaluate requirements for an IT project | 2.1 Document requirements in an appropriate way<br>2.2 Evaluate requirements<br>2.3 Prioritise requirements |
| 3. Conduct research to support the development of a computing artefact | 3.1 Document research activities in an appropriate way<br>3.2 Evaluate research material<br>3.3 Synthesise a course of action from the evaluation of material |
| 4. Employ software engineering techniques in the development of a computing artefact | 4.1 Select and justify the use of software engineering methods, techniques and tools for the development of a computing artefact<br>4.2 Employ and appropriately document the use of software engineering methods, techniques and tools for the development of a computing artefact<br>4.3 Evaluate the use of software engineering methods, techniques and tools for the development of a computing artefact |
| 5. Evaluate the success of a computing artefact | 5.1 Evaluate a computing artefact against specification and requirements<br>5.2 Test that a computing artefact meets its requirements |

| **Syllabus content** | |
|---|---|
| **Topic** | **Course coverage** |
| Introduction | • Planning your Project<br>• Documenting Requirements<br>***Learning Outcomes: 1 and 2*** |
| Conducting Research | • Documenting Research Activities<br>• Evaluating Research<br>• Synthesising a Course of Action<br>***Learning Outcome: 3*** |

| | |
|---|---|
| Employing Software Engineering | • Appropriate Development Methods<br>• Structure of a Design Specification<br>• Content of a Design Specification<br>***Learning Outcome: 4*** |
| Evaluating Computing Artefacts | • Why do we evaluate a computing artefact?<br>• How do we evaluate a computing artefact?<br>***Learning Outcome: 5*** |
| Final Report | • Structure of Final Report<br>• Content of Final Report<br>• Citations and Referencing (Reminder)<br>Appropriate Appendices<br>***Learning Outcomes: 1, 2, 3, 4 & 5*** |
| Project and Report Completion | • Private study time should include weekly meetings with your tutor to discuss your progress.<br>• Project production<br>***Learning Outcomes: 1, 2, 3, 4 & 5*** |

| Related National Occupational Standards (NOS) |
|---|
| **Sector Subject Area:** 6.1 ICT Professionals<br>**Related NOS:** 4.1.P.3 – Manage the outcomes from the data analysis assignment;<br>4.2.S.1 – Prepare for data analysis activities;<br>4.2.S.2 – Manage effective data analysis activities;<br>4.2.S.3 – Maintain effective data analysis deliverables;<br>4.3.P.1 – Manage, under supervision, information to direct human needs analysis assignments;<br>4.3.P.2 – Produce, implement and maintain, quality human needs analysis activities;<br>4.3.P.3 – Provide human needs analysis findings to others;<br>4.4.P.1 – Prepare, under supervision, for a systems analysis assignment;<br>4.4.P.2 – Carry out, as required, systems analysis activities;<br>4.4.P.3 – Monitor the effectiveness of systems analysis activities and their deliverables;<br>4.4.S.1 – Design, implement and maintain systems analysis activities;<br>4.4.S.2 – Manage the systems analysis assignment activities;<br>4.4.S.3 – Liaise with others on matters relating to systems analysis activities;<br>4.4.S.4 – Review and sign off systems analysis outcomes;<br>4.5.P.1 – Assist with the development for data design activities;<br>4.5.P.2 – Manage, under supervision, the maintenance of data design assignments;<br>4.5.P.1 – Provide others, when requested, with specified information relating to data design activities;<br>4.5.S.1 – Select and implement appropriate data design processes;<br>4.6.P.1 – Prepare for human interaction and interface (HCI) design activities;<br>4.6.P.2 – Implement, under supervision, human interaction and interface (HCI) design activities;<br>4.6.P.3 – Manage the needs of different users of HCI design activities;<br>4.7.P.1 – Prepare, under supervision, for system/solution/service design activities;<br>4.7.P.2 – Assist with the design of system/solution/service design;<br>4.7.P.3 – Monitor the progress of system/solution/service design activities;<br>5.1.P.1 - Perform systems development activities;<br>5.1.P.2 - Contribute to the management of systems development;<br>5.3.S.3 - Manage systems development activities;<br>5.1.L.2 - Control systems development activities. |

| Assessments |
|---|
| Global Assignment (100%) |
| **See also Section 3 above** |

# 6. Results and Certificates

The grade descriptors Pass, Merit and Distinction are awarded by Unit to successful candidates. A Pass is awarded for an overall Unit mark of between 40 and 59. A Merit is awarded for an overall Unit mark of between 60 and 69 and a Distinction is awarded for an overall Unit mark of 70 and above. Candidates who obtain an overall Unit mark of below 40 are classed as a *fail* in the Unit and may resit.

Grade Descriptors incorporate characteristics intended to provide a general indication of assessment performance in relation to each Unit's Learning Outcomes in this specification. The final Unit grade awarded will depend on the extent to which a candidate has satisfied the Assessment Criteria. A qualification is awarded when the candidate has achieved at least a pass in all Units.

After each assessment cycle, results slips are issued (in electronic format) which detail the grades achieved, i.e. Fail, Pass, Merit or Distinction (see *Appendix 2*). Certificates are then dispatched to Centres.

# 7. Further Information

For more information about any of NCC Education's products please contact customer.service@nccedu.com or alternatively please visit www.nccedu.com to find out more about our suite of high-quality British qualifications.

# Appendix 1 Qualification Documentation

The following NCC Education documentation has been referred to in this specification:

- Reasonable Adjustments and Special Considerations Policy
- Examination Guidelines
- Marking and Moderation Manual
- Activity Schedule
- Operations Manual

All documentation, together with access to NCC Education's online resources, is available to Centres and (where applicable) candidates who have registered for assessment.

# Appendix 2 Grade Descriptors

The grade descriptors Pass, Merit and Distinction are awarded to successful candidates. The following are characteristics intended to provide a general indication of assessment performance in relation to each Learning Outcome in this specification.

### Grade descriptors for Office Solutions Development

| Learning Outcome | Pass | Merit | Distinction |
|---|---|---|---|
| Understand how application software can support business processes | Demonstrate adequate level of understanding | Demonstrate robust level of understanding | Demonstrate highly comprehensive level of understanding |
| Be able to design and implement office solutions | Provide adequate design to address the specification | Provide detailed and appropriate design to address the specification | Provide wholly appropriate and innovative design that meets the specification |
| Be able to demonstrate that business processes have been enhanced/improved | Demonstrate ability to perform the task | Demonstrate ability to perform the task consistently well | Demonstrate ability to perform the task to the highest standard |

## Grade descriptors for Principles of Business Operations

| Learning Outcome | Pass | Merit | Distinction |
|---|---|---|---|
| Examine the frameworks of operations management | Provide examination of the subject with some suitable examples and references | Provide detailed examination of the subject with adequate use of appropriate references and examples | Provide consistently critical and detailed examination of the subject with innovative use of highly appropriate references |
| Analyse the use of technology in operations management | Demonstrate adequate ability to analyse the topic | Demonstrate ability to provide detailed and coherent analysis of the topic | Demonstrate ability to provide comprehensive, lucid analysis of the topic |
| Assess the design of goods and services | Demonstrate an adequate awareness of issues associated with the subject and make some appropriate judgements | Demonstrate a sound awareness of issues associated with the subject and make consistently appropriate judgements | Demonstrate a detailed awareness of the complexity of issues associated with the subject and make highly appropriate judgements |
| Analyse how operations management processes are developed | Demonstrate adequate ability to analyse the topic | Demonstrate ability to provide detailed and coherent analysis of the topic | Demonstrate ability to provide comprehensive, lucid analysis of the topic |
| Evaluate the use of lean operations | Provide a reasonable assessment of the subject; Ideas are generally coherent | Provide a generally strong assessment with some well-reasoned assumptions; Ideas are consistently coherent | Provide a consistently strong assessment with well-reasoned and original assumptions; All ideas are highly coherent |

## Grade descriptors for Professional Issues in IT

| Learning Outcome | Pass | Merit | Distinction |
|---|---|---|---|
| Understand the social, ethical and professional issues essential to the IT profession | Demonstrate adequate level of understanding | Demonstrate robust level of understanding | Demonstrate highly comprehensive level of understanding |
| Understand a project management life cycle and associated techniques | Demonstrate adequate level of understanding | Demonstrate robust level of understanding | Demonstrate highly comprehensive level of understanding |
| Understand how to deploy a software application | Demonstrate adequate deployment of an application | Demonstrate sound and appropriate deployment of an application | Demonstrate highly effective deployment of an application |
| Understand risks and the management of them in software projects | Demonstrate adequate level of understanding | Demonstrate robust level of understanding | Demonstrate highly comprehensive level of understanding |
| Understand the principles and techniques of IT service management | Demonstrate adequate level of understanding | Demonstrate robust level of understanding | Demonstrate highly comprehensive level of understanding |
| Be able to design software quality policies and procedures | Demonstrate ability to perform the task | Demonstrate ability to perform the task consistently well | Demonstrate ability to perform the task to the highest standard |

## Grade descriptors for Information Systems and Organisations

| Learning Outcome | Pass | Merit | Distinction |
|---|---|---|---|
| Analyse the use of Information Systems (IS) within organisations | Demonstrate adequate ability to analyse the topic | Demonstrate ability to provide detailed and coherent analysis of the topic | Demonstrate ability to provide comprehensive, lucid analysis of the topic |
| Examine the many internal and external uses of an organisation's IS | Provide examination of the subject with some suitable examples and references | Provide detailed examination of the subject with adequate use of appropriate references and examples | Provide consistently critical and detailed examination of the subject with innovative use of highly appropriate references |
| Critically evaluate the costs and benefits of a range of IS systems | Provide a reasonable assessment of the subject; Ideas are generally coherent and demonstrate some sound critical skills | Provide a generally strong assessment with some well-reasoned assumptions; Ideas are consistently coherent; Demonstrate consistently sound critical skills | Provide a consistently strong assessment with well-reasoned and original assumptions; All ideas are highly coherent; Demonstrate highly developed critical skills |
| Critically evaluate the cultural, structural and political aspects of IS | Provide a reasonable assessment of the subject; Ideas are generally coherent and demonstrate some sound critical skills | Provide a generally strong assessment with some well-reasoned assumptions; Ideas are consistently coherent; Demonstrate consistently sound critical skills | Provide a consistently strong assessment with well-reasoned and original assumptions; All ideas are highly coherent; Demonstrate highly developed critical skills |
| Examine the issues associated with human interaction with IS | Provide examination of the subject with some suitable examples and references | Provide detailed examination of the subject with adequate use of appropriate references and examples | Provide consistently critical and detailed examination of the subject with innovative use of highly appropriate references |
| Assess the effects of technological change on IS and the organisations | Demonstrate an adequate awareness of issues associated with the subject and make some appropriate judgements | Demonstrate a sound awareness of issues associated with the subject and make consistently appropriate judgements | Demonstrate a detailed awareness of the complexity of issues associated with the subject and make highly appropriate judgements |

## Grade descriptors for Information Systems Analysis

| Learning Outcome | Pass | Merit | Distinction |
|---|---|---|---|
| Understand soft and hard approaches to the analysis of information systems | Demonstrate adequate level of understanding | Demonstrate robust level of understanding | Demonstrate highly comprehensive level of understanding |
| Understand the techniques associated with requirements capture | Demonstrate adequate understanding of techniques | Demonstrate robust understanding of techniques | Demonstrate highly comprehensive understanding of techniques |
| Understand the different viewpoints associated with IS methodologies | Demonstrate adequate level of understanding | Demonstrate robust level of understanding | Demonstrate highly comprehensive level of understanding |
| Be able to apply various analytical techniques for understanding a complex organisational environment | Demonstrate adequate and appropriate application of techniques | Demonstrate sound and consistently appropriate application of techniques | Demonstrate detailed and highly appropriate application of techniques |
| Understand the relationship between the economic, social, political and technical factors influencing a business problem | Demonstrate adequate level of understanding | Demonstrate robust level of understanding | Demonstrate highly comprehensive level of understanding |
| Understand and apply the principles of interface design and the requirements and characteristics of users that motivate these | Demonstrate adequate and appropriate application of principles | Demonstrate sound and consistently appropriate application of principles | Demonstrate detailed and highly appropriate application of principles |

## Grade descriptors for Dynamic Websites

| Learning Outcome | Pass | Merit | Distinction |
|---|---|---|---|
| Understand the various tools and techniques used for Web Application development | Demonstrate adequate understanding of tools and techniques | Demonstrate robust understanding of tools and techniques | Demonstrate highly comprehensive understanding of tools and techniques |
| Be able to develop data-driven websites | Show adequate development | Show sound and appropriate development | Show innovative and highly appropriate development |
| Be able to apply the various tools and techniques used to build data-driven websites | Demonstrate adequate and appropriate application of tools and techniques | Demonstrate sound and consistently appropriate application of tools and techniques | Demonstrate detailed and highly appropriate application of tools and techniques |
| Understand the functions of web services | Demonstrate adequate level of understanding | Demonstrate robust level of understanding | Demonstrate highly comprehensive level of understanding |
| Be able to create and deploy web services | Demonstrate ability to perform the task | Demonstrate ability to perform the task consistently well | Demonstrate ability to perform the task to the highest standard |

## Grade descriptors for Database Design and Development

| Learning Outcome | Pass | Merit | Distinction |
|---|---|---|---|
| Understand the enterprise application of database systems | Demonstrate adequate level of understanding | Demonstrate robust level of understanding | Demonstrate highly comprehensive level of understanding |
| Understand how to enhance the design of and further develop a database system | Demonstrate ability to perform the task | Demonstrate ability to perform the task consistently well | Demonstrate ability to perform the task to the highest standard |
| Be able to enhance a logical database design | Demonstrate ability to perform the task | Demonstrate ability to perform the task consistently well | Demonstrate ability to perform the task to the highest standard |
| Be able to develop a physical database design | Show adequate development | Show sound and appropriate development | Show innovative and highly appropriate development |
| Be able to enhance a database system using SQL | Demonstrate ability to perform the task | Demonstrate ability to perform the task consistently well | Demonstrate ability to perform the task to the highest standard |

## Grade descriptors for Business IT Project

| Learning Outcome | Pass | Merit | Distinction |
|---|---|---|---|
| Plan and manage the development of a computing artefact | Demonstrate ability to perform the task | Demonstrate ability to perform the task consistently well | Demonstrate ability to perform the task to the highest standard |
| Gather and evaluate requirements for an IT project | Provide a reasonable assessment of the subject; Ideas are generally coherent | Provide a generally strong assessment with some well-reasoned assumptions; Ideas are consistently coherent | Provide a consistently strong assessment with well-reasoned and original assumptions; All ideas are highly coherent |
| Conduct research to support the development of a computing artefact | Demonstrate ability to perform the task | Demonstrate ability to perform the task consistently well | Demonstrate ability to perform the task to the highest standard |
| Employ software engineering techniques in the development of a computing artefact | Demonstrate ability to perform all techniques | Demonstrate ability to perform all techniques consistently well | Demonstrate ability to perform all techniques to the highest standard |
| Evaluate the success of a computing artefact | Provide a reasonable assessment of the subject; Ideas are generally coherent | Provide a generally strong assessment with some well-reasoned assumptions; Ideas are consistently coherent | Provide a consistently strong assessment with well-reasoned and original assumptions; All ideas are highly coherent |